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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TYLER, CHERYL JACKSON

ART UNIT PAPER NUMBER

3746

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

W1

# Office Action Summary

Application No.

10/057,798

Applicant(s)

BARAK, SWI

Examiner

Cheryl J. Tyler

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-19,21-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12,17-19,21-24 and 26-34 is/are rejected.
- 7) ☒ Claim(s) 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02172004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-7, 9, 17-19, 22-24, and 27-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Crittendon et al. (6,064,797). Crittendon et al. teach a motor 32 ; offset cams 60, comprising twelve offset cams 61-72 on an axis (corresponding to the claimed synchronizing device) and engaging a plurality of pumping elements; a first upstream pumping element 91 (corresponding to the claimed first tube-clamping member); pumping fingers 92-97 (corresponding to the claimed first set of tube squeezing members); a downstream pumping element 100 (corresponding to the claimed second tube-clamping member); pumping fingers 101-102 (corresponding to the claimed second set of tube squeezing members); tubing 20 (corresponding to the claimed flexible tube) having at least one squeezing segment defining two ends (see column 4, lines 49-52); a microprocessor (corresponding to the claimed communication device). Figures 4-6 illustrate the sequential operation of the tube-clamping and tube-squeezing members. Specifically, Figure 6 shows pumping element 100 is adapted to block the tubing 20. Similarly, Figure 4 shows pumping fingers 92-97 and 101-102 are adapted to constrict the tubing 20. Additionally, the figures illustrate four pumping members corresponding to the first set of tube squeezing members, and two pumping

fingers corresponding to the second set of tube squeezing members, thus making the first tube squeezing members having an area twice that of the second tube squeezing members. Crittendon et al. teach the claimed method in column 5, line 35-column 6, line 15.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 8, 10-12, 21, 26, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crittendon et al. (mentioned previously) in view of Alderson et al. (4,781,548) and Cannon et al. (4,617,014). Crittendon et al. teach most of the limitations of the claims, including the blade surface adapted to block the flexible tube. Crittendon et al. do not explicitly teach the details of a disposal flow set. Alderson et al. teach an administration set A including a drip chamber 104, a valve 108, and a cannula 128 (corresponding to the claimed flexible tube); a drop counter (unnumbered, but clearly illustrated in Figure 10 and taught in column 7, lines 5-9); and an air in-line detector (unnumbered, but clearly illustrated in Figure 10). Alderson et al. teach that the administration set A is old and well known in the art for dispensing metered fluid in a simple, yet accurate manner. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the administration set, as

taught by Alderson et al. in the Crittendon et al. invention, in order to advantageously provide a simple, and accurate means for dispensing a fluid to a peristaltic pump.

While Crittendon et al., as modified by Alderson et al., teach most of the limitations of the claims, they do not explicitly teach stoppers on each end of the pumping segment nor details of a pressure sensor for the tube. Cannon et al. teach fitments 60, 62 (corresponding to the claimed stoppers) disposed on either end of a pumping tube section 18. Cannon et al. teach that it is desirable to use the fitments to accurately locate the pumping tube section within the peristaltic assembly. Cannon et al. further teach a gauge assembly 44 (corresponding to the claimed sensor unit) adapted for determining the pressure of a liquid flowing through tube 18. The gauge assembly defines a tube receiving space formed by walls 46 engaging at least a portion of the tube (see Figure 6); a block 70 and strain beam 68 (corresponding to the claimed sensing member) projecting in the space for determining deformation-resistance of the tube). Cannon et al. teach that it is desirable to monitor the fluid pressure in the fluid line for the safe operation of an IV administration system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use stoppers and tube pressure sensors, as taught by Cannon et al., in the Crittendon et al., as modified by Alderson et al., invention in order to accurately located the pumping tube section for more efficient pumping, and to monitor fluid pressure in the tube to safely operate an IV system.

***Allowable Subject Matter***

5. Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***


6. Applicant's arguments filed February 17, 2004 have been fully considered but they are not persuasive. The applicant argues that Crittendon et al. reference teaches the sequential operation of the pump such that the pumping fingers fully block or close the tube, and they do not teach that the pumping members are "adapted" to constrict the tube, as required by the claims. The recitation of an element "adapted to be..." means that the element is so structured or dimensioned that it can perform the function for which it is so adapted. As illustrated in Figure 4, the pumping fingers are so structured that they *can* perform the constricting or blocking function for which they are so "adapted". Thus, Crittendon et al. teach the disclosed invention.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl J. Tyler whose telephone number is 703-306-2772. The examiner can normally be reached on Monday-Thursday, 6:00 - 10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R. Yu can be reached on 703-308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Cheryl J. Tyler  
Primary Examiner  
Art Unit 3746

CJT